City of Pasadena

Noise Element

Last Revised October 14, 2002 (Res. No. 8161)
Revised June 4, 1985 (Res. No. 5353)
Adopted September 16, 1975 (Res. No. 2647)

INTRODUCTION

The City of Pasadena is affected by several different sources of noise, including automobile traffic, Rose Bowl events, commercial activity, and periodic nuisances such as construction, loud parties, and other events. The Noise Element is intended to identify these sources and provide objectives and policies that ensure that noise from these sources does not create an unacceptable noise environment. Noise is a normal part of the urban environment. However, controlling noise sources can make a substantial improvement in the quality of life for City residents.

The major noise sources in Pasadena are listed below and are discussed in detail in the Existing and Future Conditions report:

Transportation-Related Noise Sources

- Traffic on Interstates 210 and 710, State Routes 134 and 110
- Street Traffic
- Future Light Rail
- Aircraft Flyovers

Other Noise Sources

- Central Arroyo
- Commercial Activity
- Nuisance Noise
- Pasadena Police Department Eaton Canyon Shooting Range

The overriding objective of the Noise Element in the General Plan is to minimize exposure of residents, workers, and visitors to excessive noise levels, while maximizing the Land Use Element's objectives to encourage mixed-use development in the Central District and other Specific Plan areas as well as to promote economic vitality. Specific objectives and policies relevant to each of the specific noise issues are listed below.

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TRANSPORTATION-RELATED NOISE SOURCES

Interstates 210 and 710, State Routes 134 and 110

Motor vehicle noise is the most common and widely dispersed continuous source in the City of Pasadena. The roadways that generate the most noise include the Foothill Freeway (Interstate 210) and the Ventura Freeway (State Route 134). In different parts of the City, Interstate 210 is both a north-south and east-west travel corridor. State Route 134 is an east-west travel corridor in the western portions of the City. To a lesser extent, the Long Beach Freeway is used for north-south travel. The City is also minimally affected by noise associated with the one-quarter mile segment of the Pasadena Freeway (SR110), which enters the City at the southern end of Arroyo Parkway and terminates at Glenarm Street.

Objective 1 The City will work to reduce the effects of noise from freeway traffic on residential and other sensitive land uses.

Policy 1a The City will encourage noise-compatible land uses near existing freeways.

Policy 1b The City will cooperate with Caltrans and Metropolitan Transportation Authority (MTA) to landscape or install noise attenuation along freeways adjacent to residential or noise sensitive uses.

Street Traffic

The major north-south roadways in the City include Lincoln Avenue, Fair Oaks Avenue, Los Robles Avenue, Lake Avenue, Allen Avenue, Altadena Drive, San Gabriel Boulevard, and Rosemead Boulevard. The major east-west roadways include Orange Grove Boulevard, Walnut Street, Colorado Boulevard, Sierra Madre Boulevard, and Del Mar Boulevard. Noise from these major roadways may affect sensitive receptors.

Objective 2 The City will work to reduce the effects of traffic-generated noise from major roadways on residential and other sensitive land uses.

Policy 2a The City will encourage noise-compatible land uses along major roadways.

Policy 2b The City will encourage site planning and traffic control measures that minimize the effects of traffic noise in residential zones.

Policy 2c The City will encourage the use of alternative transportation modes as stipulated in the Mobility Element (walking, bicycling, transit use, electric vehicles) to minimize traffic noise in the City.

Policy 2d The City will work with local and regional transit agencies and businesses to provide transportation services that reduce traffic and associated noise as stipulated in the Mobility Element.

Policy 2e The City will work to reduce the effects of traffic-related noise in residential neighborhoods, including but not limited to neighborhoods adjacent to South Orange Grove Boulevard, Saint John Avenue, Pasadena Avenue, California Boulevard, and other busy streets passing thorough residential neighborhoods.

Future Light Rail

The Los Angeles to Pasadena Metro Construction Authority is constructing a passenger light rail service that will connect Pasadena business centers with downtown Los Angeles. Future train traffic will generate noise that may exceed acceptable levels for noise-sensitive uses along the rail corridor.

Objective 3 The City will minimize noise from the Los Angeles to Pasadena Metro Line on residential and other sensitive land uses.

Policy 3a The City will encourage noise-compatible land uses and mitigation measures near the Los Angeles to Pasadena Metro Line rail system.

Policy 3b After commencing operations and regularly thereafter, the City will work with the Los Angeles to Pasadena Metro Blue Line Construction Authority and/or the Los Angeles County Metropolitan Transportation Authority (LACMTA) to install noise attenuation features if the Gold Line (formerly known as the Blue Line) adversely affects existing adjacent residential or other noise-sensitive uses (refer to Implementation Measure 13).

Aircraft Flyovers

Activity from commercial and private aircraft, emergency and traffic-monitoring helicopters contribute to the general noise environment. In particular, low-flying helicopters are a source of noise complaints in the City.

Objective 4 Considering the City's legal authority, the City will encourage minimizing noise from aircraft flyovers on residential and other sensitive land uses.

Policy 4a The City will work with local and regional agencies, including Los Angeles County and other agencies utilizing Fire Camp #2, to reduce excessive noise associated with aircraft flyovers.

Policy 4b The City will work with federal agencies to determine appropriate standards for helicopter noise.

Policy 4c The Pasadena Police Department will work to minimize helicopter noise throughout the City to the extent feasible, taking into account operational requirements and the need to protect public health and safety.

Policy 4d The City will work with federal agencies to reduce airplane noise to the extent feasible.

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OTHER NOISE SOURCES

Central Arroyo

Sports, music and other events at the Rose Bowl, Brookside Park, the Rose Bowl Aquatic Center, and the future Kids Space Museum in the Fannie Morrison Center have the potential to generate noise in the Central Arroyo. The noise levels for these activities are highly variable due to the fact that both the number of events occurring and the noise levels experienced from the events can fluctuate. However, a waiver from the Noise Restrictions Ordinance (Chapter 9.36 of the Municipal Code) has been required for some events because noise from those events exceeded permitted levels.

Objective 5 The City will balance the effects of noise associated with events held in the Central Arroyo with the benefits of events occurring at Central Arroyo facilities.

Policy 5a The City will continue to seek improvements to noise-generating equipment and activities at the Rose Bowl, Aquatics Center, Jackie Robinson Field, Brookside Park, Area H, and the future Kids Space Museum in order to minimize the effects of noise on nearby residents.

Policy 5b The City will continue to coordinate events in the Central Arroyo to minimize noise to the degree feasible.

Commercial Activity

Noise generated by commercial operations, maintenance, truck deliveries and traffic can affect adjacent residential areas and other sensitive land uses. Future industrial and commercial development should generally be located away from existing and planned residential and other sensitive zones. Day and night activities and special events in the Central District and other mixed-use areas are expected to generate urban noise throughout the year.

Objective 6 The City will minimize noise spillovers from commercial and industrial operations into adjacent residential neighborhoods and other sensitive uses, while maximizing the Land Use Element's objectives to encourage mixed-use development in the Central District and other Specific Plan areas as well as to promote economic vitality.

Policy 6a The City will encourage automobile and truck access to industrial and commercial properties abutting residential zones to be located at the maximum practical distance from residential zones.

Policy 6b The City will limit the use of motorized landscaping equipment, parking lot sweepers, and other high-noise equipment on commercial properties if their activity will result in noise that adversely affects residential zones.

Policy 6c The City will encourage limitations on the hours of truck deliveries to industrial and commercial properties abutting residential zones unless there is no feasible alternative or there are substantial transportation benefits for scheduling deliveries at another hour.

Nuisance Noise

The City occasionally receives complaints about individual sources of nuisance noise, including loud parties, events, and gardening equipment. Construction activity is also a source of occasional temporary nuisance noise throughout the City. These and other such nuisance noises are common to cities and, because of their unpredictable nature, must be addressed on a case-by-case basis.

Objective 7 The City will minimize the effects of nuisance noise on sensitive land uses as defined in Figure 1 to the degree feasible.

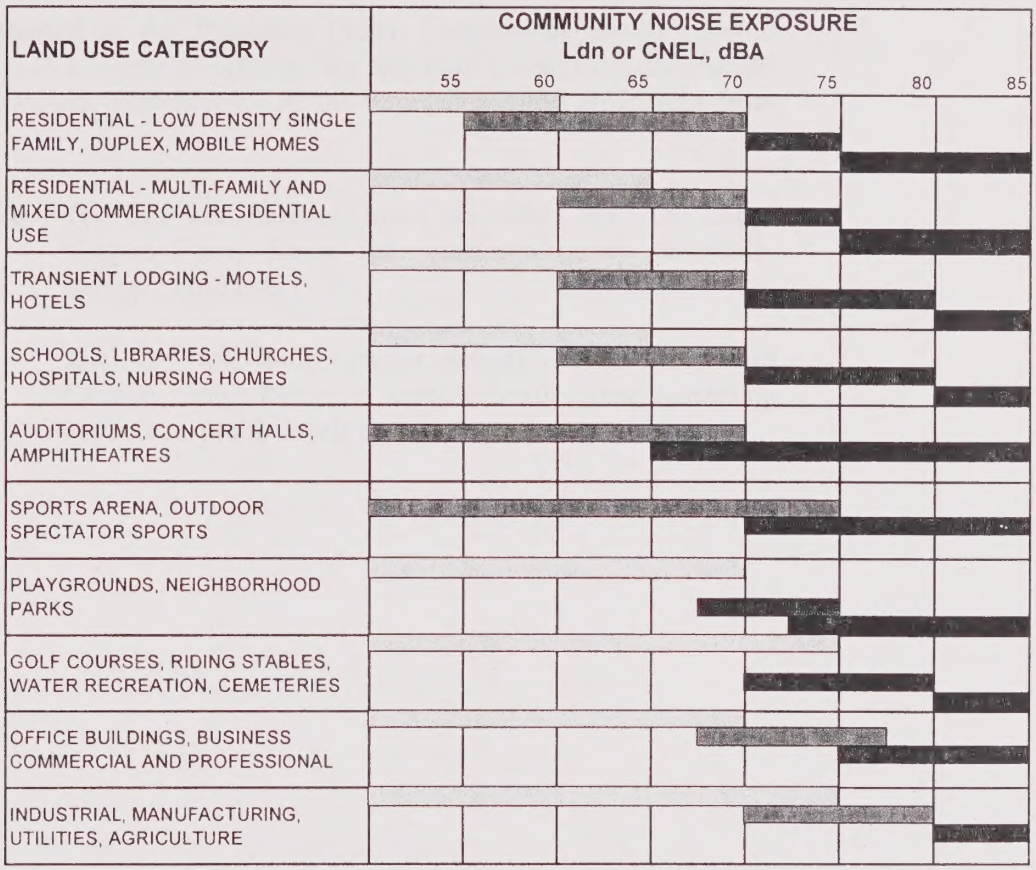
Policy 7a Whenever possible, City-sponsored events that generate noise will be scheduled during hours when effects would be minimal.

Policy 7b The City will encourage limitations on construction activities adjacent to sensitive noise receptors as defined in Figure 1.

Policy 7c The City will encourage construction and landscaping activities that employ techniques to minimize noise.

Policy 7d The City will enforce noise level restrictions contained in the City of Pasadena Noise Regulations (Chapter 9.36 of the Municipal Code), except during federal, State, or local emergencies (such as power generators required for energy emergencies).

Figure 1 – Guidelines for Noise Compatible Land Use



CLEARLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE
If new construction or development proceeds, an analysis of the noise reduction requirements should be made and needed noise insulation features included in the design.

NORMALLY ACCEPTABLE
New construction or development should be undertaken after an analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE
New construction or development should generally not be undertaken, unless it can be demonstrated that an interior level of 45 dBA can be achieved.

** Please note that these guidelines are general and may not apply to specific sites.*

Source: California General Plan Guidelines, 1998, as modified by the City of Pasadena, 2002.

Pasadena Police Department Eaton Canyon Firing Range

Noise generated at the Pasadena Police Department Eaton Canyon Firing Range is a source of concern for residents. Noise from this facility can be particularly irritating due to the impulsive sound emanating from gunfire.

Objective 8 The City will minimize noise emanating from the Eaton Canyon Firing Range into residential areas and other sensitive land uses.

Policy 8a The City will limit exterior activity within the Eaton Canyon Firing Range to work towards noise remaining within acceptable levels at nearby residences.

IMPLEMENTATION MEASURES

The following implementation measures are designed to carry out the objectives and policies of the Noise Element.

Measure 1 The City will consult the guidelines for noise compatible land use shown on Figure 1 to guide the appropriateness of land uses relative to roadway noise. [Policies 1a, 2a]

Measure 2 An acoustical study showing the ability to meet state noise insulation standards may be required for any development proposed in an area where the noise level, as indicated on Figures 2 and 3, exceeds the "clearly acceptable level" as determined by the City and shown on Figure 1. [Policies 1a, 2a]

Measure 3 The City will enforce the California Noise Insulation Standards (Title 25 California Administration Code for future development and redevelopment) to ensure an acceptable interior noise level of 45dBA Ldn in habitable rooms. [Policies 1a, 2a]

Measure 4 The City will consider the use of alternative paving materials that can reduce traffic noise, as feasible, depending on roadway conditions and cost efficiency. [Policies 1b, 2b]

Measure 5 The City will consider the use of "traffic calming" devices, to reduce traffic speed in residential zones. [Policies 2b, 2d]

Measure 6 The City will cooperate with Caltrans in the planning of noise attenuation along freeways. [Policy 1b]

Measure 7 The City will periodically review major roadways and designated truck routes to reduce traffic in residential zones. [Policy 2b]

Measure 8 As feasible and practical, new equipment purchased by the City will meet noise performance standards consistent with the best available noise reduction technology. [Policy 7c]

Measure 9 The City will review and update the Noise Restrictions Ordinance at least every five years (Chapter 9.36 of the Pasadena Municipal Code) to ensure effectiveness in controlling noise sources. [Policies 6b, 6c, 7b, 7c]

Measure 10 The City will enforce Chapter 9.37 of the Pasadena Municipal Code on the hours, use, and maintenance of leaf blowing machines. [Policy 7c]

Measure 11 The City will consider amending the Pasadena Municipal Code to restrict the use of other landscape equipment and heating, ventilation, and air conditioning (HVAC) equipment if problems arise in the future. [Policy 7d]

Measure 12 The City will monitor implementation of noise-related mitigation measures outlined in the General Plan FEIR to ensure effectiveness in minimizing noise from mobile sources. [Policies 2c, 2b, 2c]

Measure 13 The City will monitor implementation of mitigation measures outlined in the Final Supplemental Environmental Impact Report for the Los Angeles Light Rail Transit project (1993) to verify their success in minimizing noise from the Gold Line (formerly known as the Blue Line). [Policy 3b]

Measure 14 The City will work with the Federal Aviation Administration (FAA) to determine appropriate altitude standards for aircraft flying over congested areas, taking into account public health and safety.* [Policies 4a, 4b, 4d]

Measure 15 The City will cooperate with the County Fire Department and Metropolitan Water District to minimize noise conflicts associated with Los Angeles County Fire Department helicopter activity. [Policy 4a]

Measure 16 The City Police Department will continue to implement its standard operating procedures for helicopters to minimize noise conflicts. [Policy 4a]

Measure 17 The Police Department and the Environmental Health Division will coordinate tracking of community noise complaints. [Policy 7d]

Figure 2 Existing Noise Contours

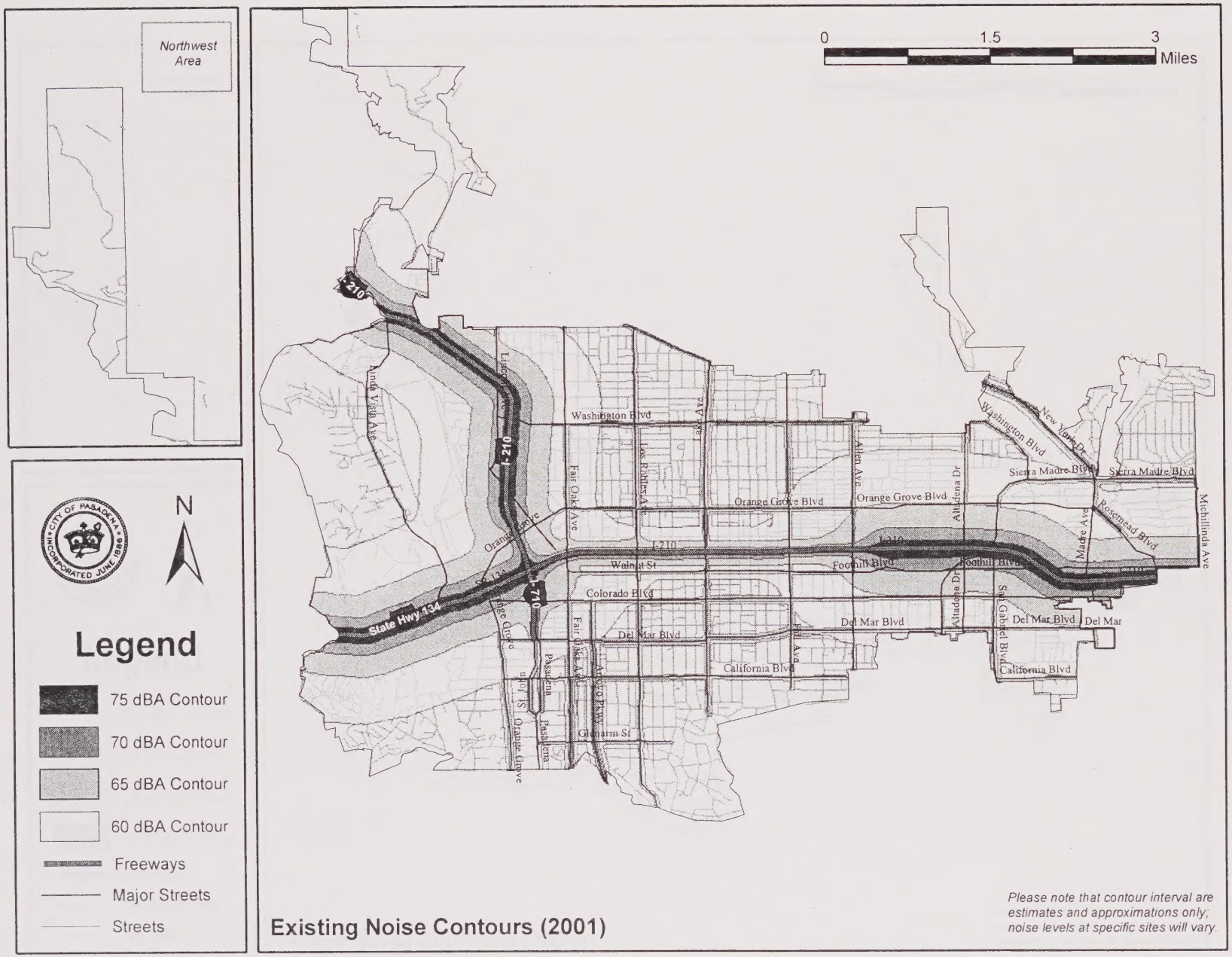
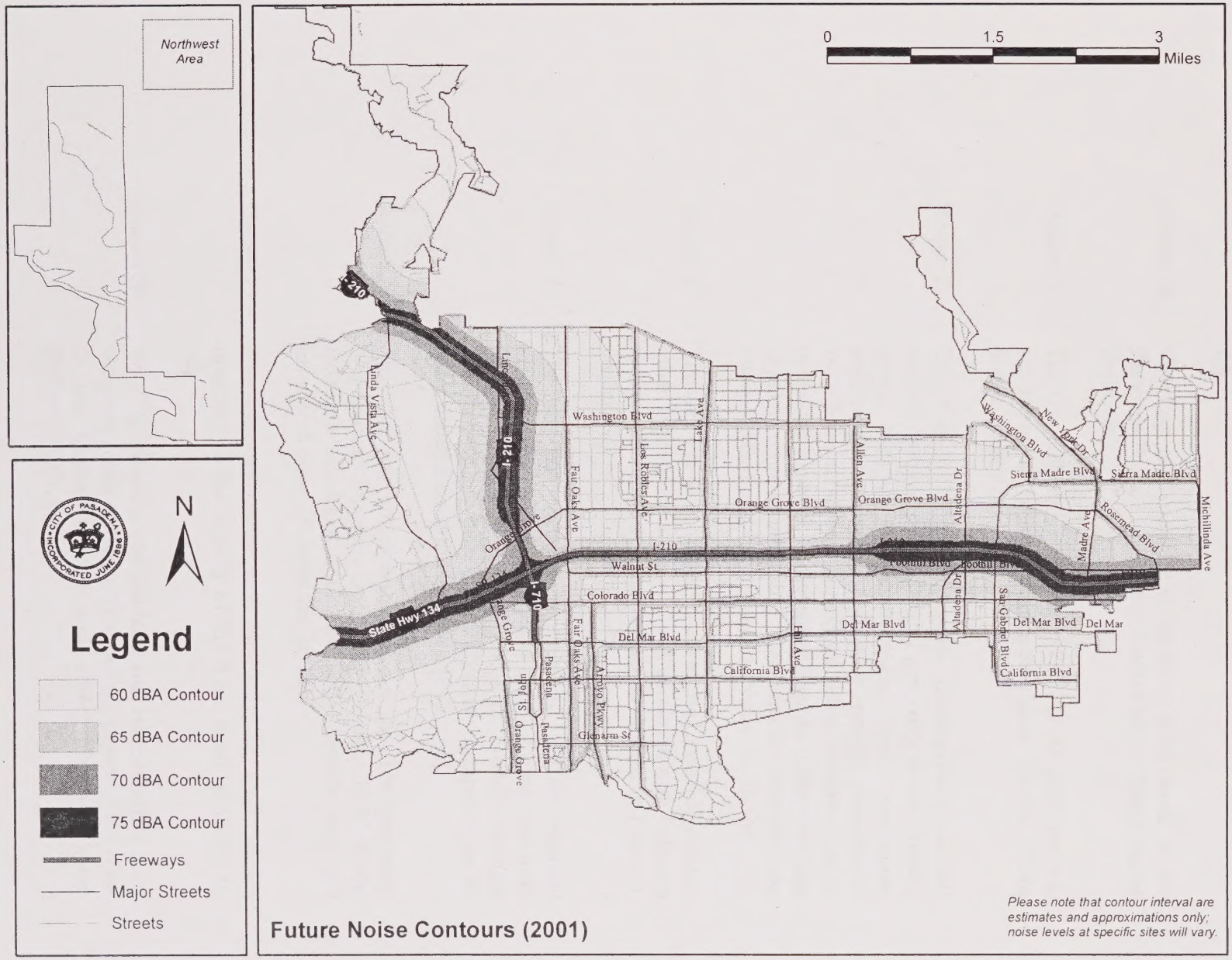


Figure 3 Future Noise Contours



Measure 18 The City will consider adoption of financial penalties for repeated violations of Pasadena Noise Restrictions Ordinance (Chapter 9.36 of the Municipal Code). [Policy 7d]

Measure 19 The City will continue to monitor noise levels at the Pasadena Police Department Eaton Canyon Firing Range. [Policy 8a]

Measure 20 The City will pursue funding to enclose the pistol range at the Pasadena Police Department Eaton Canyon Firing Range. [Policy 8a]

Measure 21 The City will encourage new developments to site outdoor commercial areas and gathering places, loading areas, parking lots, driveways, trash enclosures, mechanical equipment, and other noisier components away from residential zones and other sensitive uses as defined in Figure 1, to the extent feasible, unless the siting of such components near to noise-sensitive uses provides transportation or other benefits. [Policies 7a, 7b, 7c]

Measure 22 The City will limit new heliports to the Central District or other appropriate areas and will condition new heliports to minimize noise at sensitive uses as defined in Figure 1. [Policy 4c]

Measure 23 The City will encourage commercial and/or industrial uses abutting residential zones to limit deliveries and trash pick-ups from 7:00 A.M. to 9:00 P.M. Monday through Saturday, unless there are substantial transportation or other benefits for different times. [Policy 6c]

Measure 24 The City will continue to enforce the Transportation Management Program Ordinance (Chapter 10.64 of the Pasadena Municipal Code) to reduce vehicle trips and associated noise. [Policies 2b, 2c, 2d]

Measure 25 The City will work with the FAA to limit aircraft operating in the vicinity of the Rose Bowl. [Policies 4c, 4d]

Measure 26 The City will warn new residents and other sensitive noise receptors (refer to Figure 1) about the potential for noise in the Central District and other mixed-use areas. [Policies 6a, 6b, 6c, 7a]

Measure 27 The City will periodically monitor noise levels at major events in the Central Arroyo to determine whether or not current restrictions are achieving acceptable noise levels. [Policy 5a]

NOISE EVALUATION AND MITIGATION

The following provides a general methodology to be followed in the evaluation of potential noise problems associated with new development in Pasadena.

When mitigation must be applied to new development to ensure an acceptable noise environment, the following approaches will be considered. First preference will be given to approach (a). Second preference will be given to approach (b). Due to possible aesthetic concerns regarding the use of sound walls, approach (c) will be used only if neither approach (a) nor (b) will achieve desired noise conditions.

a. *Site layout, including setbacks, open space separation and shielding of noise sensitive uses with non-noise-sensitive uses; then*

b. *Acoustical treatment of buildings (see Standard Mitigation Packages below for the types of treatment normally required depending upon the amount of noise reduction needed); then*

c. *Structural measures: Construction of earthen berms or wood or concrete barriers.*

Standard Mitigation Packages

Below are standard mitigation packages that can generally be used to mitigate interior building noise if the needed noise reduction is 30 dBA or less and the noise problem is from a single source.

1. If a 15-20 dBA reduction is needed, the following may suffice:

    a. Air conditioning or a mechanical ventilation system; and

    b. Windows and sliding glass doors should be double-paned glass and mounted in low air infiltration rate frames (0.5 cfm or less, per American National Standard Institute [ANSI] specifications); and

    c. Solid core exterior doors with perimeter weather stripping and threshold seals

2. If a 20-25 dBA reduction is needed, the following may suffice:

a. Same as No. 1a-c; and

b. Exterior walls consist of stucco or brick veneer. Wood siding with a 1/2" minimum thickness fiberboard underlayer may also be used; and

c. Glass in both windows and doors should not exceed 20% of the floor area in a room; and

d. Roof or attic vents facing the noise source should be baffled.

3. If a 25-30 dBA reduction is needed, the following may suffice:

a. Same as No. 2a-d; and

b. The interior sheetrock of exterior wall assemblies should be attached to studs by resilient channels. Staggered studs or double walls are acceptable alternatives; and

c. Window assemblies should have a laboratory-tested STC rating of 30 or greater (Windows that provide superior noise reduction capability and that are laboratory-tested are sometimes called "sound-rated" windows. In general, these windows have thicker glass and/or increased air space between panes. In contrast, standard energy conservation double-pane glazing with a 1/8" or 1/4" air space may be less effective in reducing noise from some noise sources than single pane glazing).

Standard Disclosure in New or Rehabilitated Residential Developments in Mixed-Use Areas

When the City exercises discretionary review, provides financial assistance, or otherwise facilitates residential projects in the Central District, Specific Plan areas, or other mixed-use districts, written warnings to potential residents about noise should be made a condition of that approval, assistance, or facilitation. The following language is provided as an example:

> "*All potential buyers and/or renters of residential property within Pasadena's Central District, Specific Plan areas, and/or other mixed-use districts are hereby notified that they may be subject to audible noise levels attributed to business and entertainment-related activities common to such areas, including amplified sound, music, delivery vehicles, pedestrian and vehicular traffic, and other urban noise.*"